

Appl. No. 10/616,599 of Hnat et al.  
Atty. Dkt. No. 106684.000001

REMARKS

Rejections Under 35 U.S.C. § 102(e)

Claims 1-3, 6, 7, 9-11, 14, 16, and 17 stand rejected under 35 USC 102(e) as being anticipated by U.S. Patent No. 6,409,674 to Brockway et al. (hereinafter Brockway or '674). Specifically, regarding claims 1, 11, 16, and 17, the Examiner has cited Brockway as teaching a system (105) for measuring and remotely monitoring strain in an element comprising a sensor (305) for measuring strain in said element, producing an electrical signal representative thereof; a telemetry circuit (310) electrically coupled to said sensor (305) for encoding and transmitting the electrical signal; a reader module (140) remotely located from said sensor (305) and said telemetry circuit (310) for receiving the signals representative of strain (Figs. 1-3a) (col. 9, lines 45-49) and a central module (200) in communication with said reader module (140) for storing and processing the signal representative of strain (Col. 7, line 58-Col. 8, line 7). For the following reasons, applicant respectfully traverses this ground of rejection.

In order for a claim to be anticipated by a reference under 35 U.S.C. § 102(e), that reference must teach or disclose each and every limitation of the claim being rejected. Applicant's claim 1 claims a system for measuring strain in an element that comprises a sensor for measuring strain in the element and producing an electrical signal representative of that strain. It is asserted in the instant office action that Brockway teaches a sensor for measuring strain in an element and producing the concomitant electrical signal representative thereof, as indicated by reference numeral 305 of Brockway. However, while Brockway does disclose a sensor (105, 305) at column 7 line 17 and column 8 line 14, applicant can find no teaching in Brockway of a sensor for

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measuring strain as required by claim 1. While Brockway does assert that "...other sensors may also be used" (Col. 4 lines 64-65), the disclosure of Brockway exclusively discusses various pressure sensors and their application and implantation in the cardiovascular system. In fact, all sensors discussed in the Brockway reference are sensors utilized to measure pressure, blood gas levels, pH levels or cardiac wall thickness. There is simply no teaching in Brockway of a sensor for measuring strain as required by applicant's claim 1.

Regarding the rejection of applicant's independent claim 11, the comments submitted above with respect to claim 1 are equally applicable. Since Brockway does not teach or disclose a sensor for measuring strain, claim 11 can not be anticipated thereby. In fact, even where Brockway does discuss other sensors, it does not discuss sensors for measuring strain. Brockway at col. 14 line 61 through col. 15 line 4 reads as follows:

Though particular aspects of the system have been describe in conjunction with its use in measuring pressure, it is understood that the system can also be used with an implantable sensor for sensing manifestations of other physical parameters such as, by way of example, but not be way of limitation, sensing blood gasses or other gasses (e.g., O<sub>2</sub>, CO<sub>2</sub>), pH, electrocardiograms, and blood glucose. In another example, the system is used in conjunction with ultrasonic measurements (e.g., measuring blood flow, or measuring heart wall thickness for determining contractility, etc.).

Accordingly, while Brockway mentions other sensors in passing, it does not contemplate the use of a sensor for measuring strain in an element as required by

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applicant's independent claims 1 and 11. Furthermore, since independent claims 1 and 11 are not anticipated under 35 U.S.C. § 102(e) to Brockway, claims 2-4, 6, 7, 9-10, 14, 16, and 17 can not be anticipated by Brockway since these claims depend from either claim 1 or claim 11, and include all the limitations hereof.

As a further note, the Examiner has asserted that Brockway teaches a surface acoustic wave sensor for measuring strain as claimed in claim 6, at col. 15 lines 1-4. As discussed herein above, col. 15 lines 1-4 simply states that the Brockway system can be used "in conjunction with" ultrasonic measurements for measuring blood flow or heart wall thickness. Brockway does not, however, teach or disclose the use of an acoustic wave sensor for measuring strain in an element.

With respect to claim 7, it is asserted that Brockway teaches a system for measuring and remotely monitoring strain in an element wherein said sensor (305) for measuring strain is a miniaturized strain gauge at col. 9 lines 36-37. However, col. 9 lines 36-37 of Brockway actually discloses the use of a "semi-conductor resistive strain gauge" incorporated as a component of pressure transducer 305 to measure pressure. Accordingly, Brockway actually teaches a system for measuring pressure utilizing a semiconductor resistive strain gauge, not a system for measuring strain in an element.

Rejections under 35 U.S.C. § 103(a)

Claims 4, 5, 12, and 13 are rejected under 35 USC § 103(a) as being unpatentable over Brockway et al. in view of U.S. Patent No. 6,533,733 to Ericson et al. (hereinafter Ericson). Specifically it is asserted that Ericson teaches a cantilever beam type capacitive sensor at col. 6 lines 55-62, and that it would have been obvious to one of ordinary skill in the art to modify Brockway with the teachings of Ericson to arrive at the invention of

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claims 4, 5, 12, and 13. However, since Brockway does not teach a system for measuring strain in an element comprising a sensor for measuring strain, as discussed in detail herein above, not all claim limitations are taught by the combination of the references. Accordingly, claim 4, 5, 12, and 13 can not be held unpatentable as obvious under 35 USC § 103(a) over Brockway in view of Ericson.

Claims 8 and 15 are also rejected under 35 USC §103(a) as being unpatentable over Brockway in view of U.S. Patent No. 6,740,075 in view of Lebel et al. However, for all the reasons set forth above with respect to claims 4, 5, 12, and 13, claims 8 and 15 can not be held unpatentable under 35 USC § 103(a).

Summary

Applicant has responded to each ground of rejection set forth in the instant office action. A petition for a one-month extension of time for response and the fee therefore is included with this correspondence. Applicant hereby courteously solicits the allowance of all claims and the prompt passage to issue of the instant application. If the Examiner believes there are other unresolved issues in this case, applicant's attorney would welcome a telephone call at (502) 584-1135 to discuss such remaining issues.

Respectfully submitted,



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